Graduate Enrollment Declines in Most Academic Disciplines

A survey of graduate schools has found that enrollment increased last fall in engineering and the biological sciences but declined in other areas.

The survey by the Graduate Record Examinations Board and the Council of Graduate Schools in the United States showed enrollment declined in education, the humanities, the social sciences, and the natural sciences. Enrollment of women in graduate schools increased 3.8 per cent last fall, while enrollment of men declined 1.4 per cent.

The following table, based on data from 85 per cent of the 365 institutions that are members of the Council of Graduate Schools, shows the one-year changes by area of study:

Area of study	Enrollment change, fall, 1978, to fall, 1979		
	Public	Private	Total
First-time graduate students			
Education	− 2.8%	−13.7%	− 4.6%
Humanities	− 1.5%	− 4.3%	− 2.3%
Social sciences	+ 0.2%	− 1.3%	− 0.3%
Physical sciences	− 5.0%	0.0%	− 3.8%
Engineering	+ 1.5%	+ 2.0%	+ 1.7%
Biological sciences	− 1.0%	+ 3.5%	− 0.1%
All graduate students			
Education	− 4.5%	− 7.5%	− 5.0%
Humanities	− 3.0%	− 5.0%	− 3.5%
Social sciences	+ 0.9%	+ 4.0%	+ 1.9%
Physical sciences	+ 1.6%	+ 2.5%	+ 1.8%
Engineering	+ 1.7%	+ 4.7%	+ 2.8%
Biological sciences	+ 1.4%	+ 2.9%	+ 1.7%

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News Summary

Articles on inside pages

Twice as many private colleges closed during the 1970's than opened, a survey finds. Story, and Fact-File listing the institutions that shut down during the decade, on Pages 7-8.

Three universities have been removed from, and three colleges added to, the censure list of the American Association of University Professors. Story on Page 3.

A campaign is planned to overturn the Supreme Court's decision that faculty members at Yeshiva University can't bargain collectively. Story on Page 4.

One board of regents will replace several separate college and university governing boards under a reorganization approved by the Massachusetts legislature. Story on Page 9.

Skidmore College plans to heat its buildings with used crankcase oil next winter. Story on Page 6.

The Senate has approved a higher-education bill that would require students to repay the interest subsidies on their federal Guaranteed Student Loans. Story on Page 11 and a Fact-File comparing the Senate and House college aid bills on Pages 12-13.

A nutrition study published by the National Academy of Sciences has run into fire on Capitol Hill. Story on Page 11.

Some Chinese officials are uneasy about the effects of the new freedom of expression won by writers and artists in that country last fall. Story on Page 17.

More shootings and unrest have erupted between Palestinian students and Israeli troops on the West Bank of the Jordan River. Story on Page 18.

ALSO IN THIS ISSUE

Books	19
Bulletin Board	23-47
Calendar	21
Canadian News	17
Deadlines	21
Deaths	22
Fact-Files	4, 7-8, 12-13
Gazette	22
Grants	22
Ideas	18
International News	17-18
Letters	20
Marginalia	2
News in Brief	2
Point of View	48
Science	10
Washington News	11-15

The Social Repercussions of an 'Information Society'

Librarians and other scholars concerned about the effects of technological change try generating information of their own 'to avoid stumbling blindly into the future'

By Jack Magarrell

NEW YORK

▶ "Approximately half the American payroll now goes for the manipulation of symbols rather than the production of things," says Douglass Cater, senior fellow of the Aspen Institute for Humanistic Studies.

▶ "The text content of 3,200 books could be contained on a single, two-sided [video] disc," says Lewis M. Branscomb, vice-president and chief scientist of International Business Machines Corporation. "For people who need this much information (half a million pages of text in your home for a replication cost of less than $20), it certainly beats the printing press."

▶ "A real danger exists of generating useless and unproductive information," says Carlton Rochell, dean of libraries at New York University. "Studies show that since the end of World War II the number of information workers in our society has been steadily increasing. At the same time, productivity has declined dramatically."

'No Historical Analog'

Despite Mr. Rochell's reservations about the proliferation of information, he was one of the organizers of a colloquium here last week that sought to generate more information about social repercussions of technological changes, "to avoid stumbling blindly into the future."

The colloquium, called "an information agenda for the 1980's," was scheduled in connection with the American Library Association's annual conference, now under way here.

"There is no historical analog to the information society," Mr. Rochell said in a paper prepared for the colloquium, "and for this reason it raises novel and arresting questions of social policy which we as a society must explore and answer."

For example, he said, an information society "cannot be organized around the concept of private property" because information is inherently different from manufactured goods.

Mr. Cater, in one of three papers commissioned by the American Library Association, addressed issues of human values in an information society.

University presses in the U. S. are being urged to cultivate the international market in order to cope with increased costs of scholarly publishing. See story, Page 19.

"Already," he said, "there are symptoms of communication failures based on a superabundance of information, inadequately assimilated, rather than its scarcity.

"The crisis of leadership can be attributed at least in part to the contemporary condition when information (or 'news') about near and distant crises is broadcast in a never-ending stream into almost every household well before our leaders have had time to cogitate, to plan, and to act."

Mr. Branscomb of I.B.M., in a paper on the technology of information, said new forces are breaking down the established patterns for creating books and collecting them in libraries.

Tapes and Discs

Several professional journals already are beginning to experiment with "receiving not only the author's paper manuscript, but also a floppy disc or magnetic tape from his word-processing computer containing the same material in machine-readable form."

The floppy disc, used to store information for small computers, contrasts dramatically with an I.B.M. "mass storage system" described by Mr. Branscomb. The system can store in one "computer library" the text of 200,000 books, he said. It "permits any selected block of 100 million characters to be made available in 12 seconds, maximum, with any portion within that block found in a few hundredths of a second."

"I predict that we are in for an exciting, turbulent period in which government experiments with encouraging a new diversity in information services," Mr. Branscomb said, "and new information-service ventures test the public's receptivity for the new technologies.

"We know from the hard lesson of television that the software that emerges never seems to live up to the promise of the new technology for distributing it. The same

Continued on Page 10, Column 3

Faculty Pay Up, Purchasing Power Down

1979-80's average salary increase of 7.1 pct., highest in decade, overwhelmed by inflation

WASHINGTON

Average faculty salaries in the academic year now ending increased by a larger percentage than in any other year of the past decade, the American Association of University Professors has reported.

Even so, the A.A.U.P. said, faculty members suffered the decade's largest loss in purchasing power, because of the high inflation rate.

The average salary in 1979-80 for full-time faculty members of all ranks at all types of institutions was $21,620, an increase of 7.1 per cent over the year before, the A.A.U.P. said.

Because of an inflation rate of 13.5 per cent, it said, the average faculty member's purchasing power declined by 5.6 per cent in 1979-80.

W. Lee Hansen, who is head of the A.A.U.P.'s committee on the economic status of the profession, reported at the organization's annual meeting here this month that faculty members had lost 20 per cent of their purchasing power over the past 10 years.

Mr. Hansen, professor of economics at the University of Wisconsin at Madison, said the average faculty member who received a salary of $12,637 in 1969-70 would have had to make $25,990 in 1979-80 to maintain the same purchasing power.

A Fact-File showing average salaries by faculty rank and type of institution in 1979-80 appears on Page 4.

Over the past five years, Mr. Hansen said, the government's consumer price index rose 50 per cent, an increase matched by average faculty salaries at only 3 per cent of the country's colleges and universities and by 2 per cent of all faculty members.

A list of average salaries at specific colleges and universities, not yet available from the A.A.U.P., is scheduled for publication in the August 25 issue of *The Chronicle*.

The A.A.U.P. will publish its full report on faculty salaries in the September issue of *Academe: Bulletin of the AAUP*. The association expects to have advance copies of its report available by mid-July at its offices at One Dupont Circle, Washington 20036, at a price of $25 for nonmembers and $10 for members.

—JACK MAGARRELL

FACT–FILE

Faculty Pay in 1979-80

Year-to-year increases in average salaries and the effect of inflation

Academic years:	'70-'71	'71-'72	'72-'73	'73-'74	'74-'75	'75-'76	'76-'77	'77-'78	'78-'79	'79-'80
In current dollars										
Professor	+5.3%	+3.3%	+4.3%	+5.2%	+5.8%	+6.2%	+4.7%	+5.2%	+5.6%	+7.5%
Associate	+5.5%	+3.5%	+4.2%	+5.2%	+5.9%	+5.9%	+4.7%	+5.4%	+5.8%	+7.0%
Assistant	+5.2%	+3.7%	+4.1%	+4.8%	+5.7%	+5.7%	+4.7%	+5.3%	+5.9%	+6.8%
Instructor	+5.8%	+4.5%	+3.9%	+4.7%	+5.8%	+6.1%	+4.7%	+5.4%	+6.0%	+6.4%
All ranks	+5.4%	+3.6%	+4.1%	+5.1%	+5.8%	+6.0%	+4.7%	+5.3%	+6.0%	+7.1%
After adjusting for inflation										
Professor	+0.2%	−0.3%	+0.3%	−3.5%	−4.8%	−0.8%	−1.0%	−1.4%	−3.5%	−5.3%
Associate	+0.4%	−0.1%	+0.2%	−3.5%	−4.7%	−1.1%	−1.0%	−1.2%	−3.3%	−5.7%
Assistant	+0.1%	+0.1%	+0.1%	−3.9%	−4.9%	−1.3%	−1.0%	−1.3%	−3.2%	−5.9%
Instructor	+0.7%	+0.9%	−0.1%	−3.9%	−4.8%	−0.9%	−1.0%	−1.2%	−3.1%	−6.3%
All ranks	+0.3%	0.0%	+0.1%	−3.6%	−4.8%	−1.0%	−1.0%	−1.3%	−3.1%	−5.6%

Average salaries in 1979-80 and change from 1978-79 by rank and type of institution

	All combined		Public		Private independent		Church-related	
Academic rank	Average	Change	Average	Change	Average	Change	Average	Change
Doctorate-granting universities								
Professor	$30,680	+7.2%	$30,120	+7.2%	$33,400	+7.4%	$28,030	+6.9%
Associate	22,500	+6.7%	22,450	+6.7%	23,040	+7.0%	21,550	+6.3%
Assistant	18,180	+6.5%	18,160	+6.5%	18,390	+6.7%	17,680	+5.8%
Instructor	14,250	+5.6%	14,160	+5.6%	14,770	+5.6%	14,330	+5.8%
All ranks	23,770	+6.9%	23,440	+6.8%	25,930	+7.1%	21,630	+6.4%
Other institutions offering degrees beyond the baccalaureate								
Professor	$26,610	+8.6%	$27,200	+9.0%	$26,160	+7.1%	$22,920	+6.8%
Associate	21,180	+7.6%	21,630	+8.0%	20,540	+6.3%	18,960	+6.1%
Assistant	17,420	+7.3%	17,790	+7.6%	16,820	+6.5%	15,900	+6.6%
Instructor	14,030	+6.8%	14,400	+7.0%	13,380	+6.0%	12,450	+5.3%
All ranks	20,870	+7.9%	21,390	+8.2%	20,100	+6.6%	18,410	+6.4%
Institutions awarding only baccalaureate degrees								
Professor	$22,780	+6.5%	$24,230	+6.4%	$24,740	+6.5%	$20,630	+6.6%
Associate	18,380	+6.5%	20,110	+6.8%	18,860	+6.2%	17,220	+6.6%
Assistant	15,420	+6.4%	17,030	+6.9%	15,510	+6.1%	14,610	+6.2%
Instructor	12,760	+6.6%	13,920	+6.5%	12,670	+7.1%	12,240	+6.4%
All ranks	17,630	+6.5%	18,860	+8.7%	18,560	+6.3%	16,420	+6.5%
2-year institutions with academic ranks								
Professor	$24,750	+6.2%	$25,190	+6.2%	$17,930	+4.7%	$15,950	+8.5%
Associate	21,010	+6.3%	21,270	+6.3%	16,270	+4.8%	15,420	+7.4%
Assistant	17,680	+6.7%	17,930	+6.7%	13,900	+6.2%	13,260	+4.8%
Instructor	15,690	+6.9%	16,130	+7.2%	11,320	+2.5%	10,390	+6.2%
All ranks	19,080	+6.5%	19,450	+6.6%	13,820	+4.5%	13,280	+6.9%
Institutions without academic ranks								
No rank	$19,570	+6.7%	$20,080	+6.8%	$14,170	+5.8%	$12,330	+7.6%
All institutions except those without academic ranks								
Professor	$28,450	+7.5%	$28,830	+7.7%	$29,960	+7.2%	$22,640	+6.7%
Associate	21,390	+7.0%	21,940	+7.1%	21,030	+6.6%	18,440	+6.4%
Assistant	17,450	+6.8%	17,950	+6.9%	16,960	+6.5%	15,410	+6.2%
Instructor	14,260	+6.4%	14,810	+6.5%	13,250	+6.1%	12,410	+6.1%
All ranks	21,620	+7.1%	22,130	+7.3%	22,120	+6.8%	17,770	+6.4%

Note: Salaries are for academic year. Data are from 2,234 institutions reporting comparable data for 1978-79 and 1979-80.

SOURCE: AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

NOTE

ONLY THE FOLLOWING PAGES OF THIS PUBLICATION

HAVE BEEN FILMED

p. 1, 4, 7-8.